

REMARKS

(1) The Examiner has rejected claims 4, 6-8, 13, 15-17 and 19 under 35 U.S.C. 102(b) as being anticipated by, or under 35 U.S.C. 103(a) as being unpatentable over International Patent Application No. WO 00/16320 to Nishiuchi et al. (using EP 1128368A1 in English) (herein PCT Nishiuchi et al.). (2) The Examiner has further rejected claims 5, 14, 25 and 26 under 35 U.S.C. 103(a) as being unpatentable over PCT Nishiuchi et al. in view of U.S. Patent 5,589,995 to Saito et al. (3) In addition, the Examiner has rejected claims 4, 13, 19, 25 and 26 under 35 U.S.C. 103(a) as being anticipated by U.S. Patent 6,850,469 to Ogawa et al., or under 35 U.S.C. 103(a) as being unpatentable over EP 1128368A1 to Nishiuchi et al. (Herein EP Nishiuchi et al.). (4) Moreover, the Examiner has rejected claims 6-8 and 15-17 under 35 U.S.C. 103(a) as being unpatentable over Ogawa et al. (?) in view of EP Nishiuchi et al. (5) The Examiner has rejected claims 1-3, 11, 12 and 18 under 35 U.S.C. 103(a) as being unpatentable over EP Nishiuchi et al. in view of U.S. Patent 6,115,340 to Van Den Enden et al. (6) Finally, the Examiner has rejected claims 5 and 14 under 35 U.S.C. 103(a) as being unpatentable over EP Nishiuchi et al. in view of Van Den Enden et al., and further in view of U.S. Patent 5,703,867 to Miyauchi et al.

Firstly, Applicant would like to note that both EP Nishiuchi et al., published August 29, 2001, and Ogawa et al.,

filed March 12, 2001, are improper references in that they both fall after the effective filing date of the subject application, which, though filed in the U.S. on November 21, 2001, is entitled, under 35 U.S.C. 119, to the filing date of its priority European Patent Application Nos. 01200894.2, filed March 9, 2001, and 00204730.6, filed December 22, 2000, certified copies thereof having been filed with the subject application. English translations of these priority documents are not needed in that the documents are already in English (Applicant has checked the submitted copies in PAIR and confirmed that they are in English). In support thereof, Applicant refers the Examiner to MPEP §201.15, where it is stated "In those cases where the applicant files the foreign papers for the purpose of overcoming the effective date of a reference, a translation is required if the foreign papers are not in the English language." (emphasis added). Hence, the above rejections numbered 3-6 must fall.

The PCT Nishiuchi et al. reference (using the English translation of EP Nishiuchi et al.) discloses an optical information recording medium, method of manufacture thereof, and method of recording and reproduction, in which, in a track, a data signal 32 is bounded on each end by guard data areas 35 and 36. With regard to the element in Applicant's claim 1 "said first and second guard fields have lengths such that an end position of said second guard field of a preceding data block is located within an

area of said first guard field of a succeeding data block", the Examiner indicates that this overlap will result when the information layers are appropriately offset.

The subject invention concerns how the transmissivity of an upper information layer may affect the reading of the lower information layer. In particular, as described in the Substitute Specification on page 5, paragraph [0007], and shown in Fig. 6, prior art multi-layer record carriers included a recording unit block beginning with a preamble and ending with a postamble. A first guard field then precedes the preamble, and a second guard field follows the postamble. A gap is purposefully positioned between the second guard field of one recording unit block and the first guard field of an ensuing recording unit block. As now described on page 5, line 23 to page 6, line 12 (paragraph [0009], the transmissivity of the upper layer differs in written areas (recording unit block) and in unwritten areas (gaps).

The subject invention seeks to reduce this difference in transmissivity by causing the first and second guard portions of succeeding data blocks to overlay one another thereby eliminating the gap (page 21, line 15 to page 22, line 14 (paragraphs [0048]-[0049])). In claim 1, the limitation "said first and second guard fields have lengths such that an end position of said second guard field of a preceding data block is located within an area of said first guard field of a succeeding data block" is prefaced by the

limitation "in at least an upper information layer of said at least two substantially parallel information layers," and therefore relates to succeeding data blocks in the same information layer, and that the end of a second guard field at the end of one data block extends into the first guard field at the beginning of a succeeding data block, thereby eliminating the gap between data blocks.

In the rejection, the Examiner indicates that this limitation may be found in PCT Nishiuchi et al., and notes paragraph [0061] of EP Nishiuchi et al. for an English translation.

Applicant submits that the Examiner is mistaken. In particular, paragraph [0061] states:

"Thus, it is preferable that the amount of dislocation between the two information layers, which has no effect on the range of the data signals 32, is not more than the sum of the length of the gap area 33 and that of the guard data area 35, or is not more than the sum of the length of the gap area 34 and that of the guard data area 36."

It should be apparent from the above that PCT Nishiuchi et al. is referring to the amount of offset between two information layers. However, the noted limitation of claim 1 regards the positioning of the end of a second guard area of a data block and the beginning of a first guard area of succeeding data block, in which both data blocks occur in the same information layer. It appears that the Examiner is fixated on the environment of the invention, i.e., a multi-layer record carrier, and is not

recognizing the limitations of the claim element, i.e., "in at least an upper information layer of said at least two substantially parallel information layers".

Applicant submits that this feature of the invention is neither shown nor suggested by PCT Nishiuchi et al.

Claim 4 claims "said first guard field and said second guard field each have a predetermined minimum length which is approximately equal to the sum of half the diameter of the radiation beam in the upper one of said at least two information layers when focused on the lowest one of said at least two information layers, and a maximum allowed misalignment between the two information layers". The Substitute Specification, on pages 17 and 18, paragraph [0038], describes the desirability of specifying a minimum length of the first and second guard fields. Applicant has determined that this minimum size should be equal to or greater than $\frac{1}{2}$ the diameter of the laser beam in the upper layer when the laser beam is focused on the lower layer, and the maximum allowable misalignment. This is described in detail on page 18, line 8 to page 19, line 6 (paragraphs [0040]-[0041]).

In response thereto, the Examiner states "The examiner concludes that the WO document has such a capability, i.e., the focusing of an optical beam (which has a beam diameter) upon the lower of the two information layers. As further noted in paragraph 0120 of the WO document the in within a range of 20-100 mum in

diameter. Although there is no clear depiction of a minimum length of the guard fields in the WO document, because the document provides for an overlap from 0 to a maximum as discussed in paragraph 0061, and a light beam diameter from 20-100 μm is permitted, that a minimum length as recited is not inherently present is an obvious design capability for optimizing system parameters".

Applicant submits that the Examiner is mistaken. In particular, paragraph 0120 of PCT Nishiuchi et al., using the English translation EP 1128368A1, states:

"However, when light beams are focused on the second information layer, the light beams through the first information layer depend mainly on the thickness of a separating layer and the NA of an object lens. In the case where the NA of an object lens is 0.5 to 0.6 and the thickness of a separating layer is 20 to 100 μm , the amount of light that reaches the second information layer is affected by the area in the vicinity of a light-focused portion, ranging from about 20 to 100 μm in diameter. In other words, the amount of light that reaches the second information layer varies depending on the recorded state of the first information layer. Therefore, errors are caused in a recording power suitable for the second information layer, when viewed from the pickup side."

It should be apparent from a reading of the above paragraph that PCT Nishiuchi et al. is noting that the amount of light reaching the second information layer is dependent on the recorded condition of the first information layer, and that the area in the vicinity of a light-focused portion ranges from about 20 to 100 μm in diameter. However, there is no disclosure or


suggestion of any relation between the diameter of the light beam in the first information area and the permissible misalignment of the two information areas, and the minimum size of each of the first and second guard fields. Particularly, there is no disclosure of the above-noted limitation of claim 4.

The Saito et al. patent discloses header information of information signal recording and reproducing method and apparatus therefor, in which dummy data is inserted in appropriate fields to ensure proper synchronization. However, Applicant submits that Saito et al. does not supply that which is missing from PCT Nishiuchi et al., i.e., "in at least an upper information layer of said at least two substantially parallel information layers, said first and second guard fields have lengths such that an end position of said second guard field of a preceding data block is located within an area of said first guard field of a succeeding data block" or "in at least an upper information layer of said at least two substantially parallel information layers, said first guard field and said second guard field each have a predetermined minimum length which is approximately equal to the sum of half the diameter of the radiation beam in the upper one of said at least two information layers when focused on the lowest one of said at least two information layers, and a maximum allowed misalignment between the two information layers".

In view of the above, Applicant believes that the subject invention, as claimed, is neither anticipated nor rendered obvious by the prior art, either individually or collectively, and as such, is patentable thereover.

Applicant believes that this application, containing claims 1-8, 11-19, claims 20-24 (withdrawn), 25 and 26, is in condition for allowance, and such action is respectfully requested.

Respectfully submitted,

by 
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